ZOOLOGY.—*A new antelope squirrel from Arizona.*[1] E. A. GOLDMAN, Bureau of Biological Survey.

Further study of the mammals of Arizona has resulted in the detection of a hitherto unrecognized antelope squirrel in the Grand Canyon of the Colorado River. The new form is of considerable interest in tracing the distribution of species in that remarkable region. It is described subspecifically as follows:

Ammospermophilus leucurus tersus, subsp. nov.

Grand Canyon Antelope Squirrel

Type.—From lower end of Prospect Valley, Grand Canyon, Hualpai Indian Reservation, Arizona (altitude 4,500 feet). No. 202645, ♂ young adult, U. S. National Museum (Biological Survey collection), collected by E. A. Goldman, October 3, 1913. Original number, 22269.

Distribution.—Terraces along the southern side in Grand Canyon, on the Hualpai Indian Reservation, Arizona. Upper Sonoran Zone.

General characters.—Resembling *Ammospermophilus leucurus cinnamomeus,* but smaller; color usually darker, the sides of body below white stripes more heavily mixed with black; skull with distinctive details, especially the lighter dentition. Similar in size to typical *A. l. leucurus,* but color much darker, the back less heavily overlaid with gray; skull essentially as in *leucurus.*

Color.—*Type* (anterior half of body in worn summer pelage, posterior half acquiring winter coat): Top of head, neck, shoulders, and anterior part of back light cinnamon brownish, mixed with gray, the brownish element predominating on head; posterior part of back, rump and outer sides of hind limbs near mikado brown, finely and rather inconspicuously mixed with white; sides of body below usual white stripes near mikado brown, moderately mixed with black; under parts, including inner sides of limbs, white; outer sides of forearms light pinkish cinnamon, this color passing down and gradually fading out on toes of forefeet; upper surface of hind feet dull white, tinged along outer side with light pinkish cinnamon; tail above mikado brown at base, thence mixed black and white, the lateral margins and extreme tip pure white, below white, with a conspicuous, subterminal black band.

Skull.—About like that of *A. l. leucurus,* but rather small, with narrow nasals, and narrow interorbital space. Similar to that of *A. l. cinnamomeus,* but smaller; dentition lighter; molariform toothrows decidedly shorter.

Measurements.—*Type:* Total length, 208 mm.; tail vertebrae, 67; hind foot, 38.5. Average and extremes of nine full grown males and females, including type, from type locality: 204 (194–214); 62 (54–72); 39 (38–40); *Skull* (type): Greatest length, 37.6; condylobasal length, 34.8; zygomatic breadth, 22.2; breadth of braincase (at notch behind zygomata), 18.1; interorbital breadth, 9.2; least postorbital breadth, 13.5; length of nasals, 10.6; maxillary toothrow, 6.3.

Remarks.—In the Grand Canyon of the Colorado River, which bisects the high plateau region of northern Arizona, antelope squirrels are restricted mainly to the broader terraces bordering the inner gorge. These terraces are

[1] Received October 3, 1929.

cut at frequent intervals by side canyons, some of which extend with sheer walls to the nearly or quite precipitous outer rim of the main canyon. The higher parts of the Coconino Plateau along Grand Canyon are unsuited to the needs of antelope squirrels and the side canyons mentioned, while not absolute barriers at their heads, evidently tend to break the continuity of range within the main canyon.

Specimens from Indian Gardens, on the broad terrace along the inner gorge at 3,800 feet altitude on the south side near the end of the Grand Canyon Railroad, are darker and richer in color than typical *A. l. cinnamomeus* and may be grading toward the form here described, but in cranial characters agree with the former. Some specimens from localities in northwestern Arizona, north of the Grand Canyon are similar to the Prospect Valley animal in cranial details and are not widely different in color, but are evidently more nearly intermediate between *A. l. leucurus* and *A. l. cinnamomeus*. The restricted range of *A. l. tersus* is closely approached on the west, beyond the Grand Wash Cliffs, by the wide distribution area of *Ammospermophilus harrisii*, a related but apparently quite distinct species. The narrow gap between the known ranges of the two has not been thoroughly explored, but appears to be a barrier formed by high spurs of the plateau, extending to sheer or uninhabitable canyon walls.

Specimens examined.—Ten, all from the type locality.

ZOOLOGY.—Neoaplectana glaseri, *n.g., n.sp.* (*Oxyuridae*), *a new nemic parasite of the Japanese beetle* (Popillia japonica *Newm.*).[1]

G. STEINER, Office of Nematology, Bureau of Plant Industry.

In a lot of fourteen dead larvae of the Japanese beetle[2] submitted to him for a diagnosis as to the cause of the death, Dr. R. W. Glaser of the Rockefeller Institute for Medical Research at Princeton, N. J. found thousands of nemas. These were sent to the writer for identification.

The form seems to be new, belonging not only to a new species but also to a new Oxyurid genus exhibiting close relationship to the genera *Aplectana* and *Steinernema*. The present paper deals only with the description of the new form; the life cycle and economic significance of the parasite will be studied by Dr. Glaser himself. It is the first time, so far as we know, that a nema has been observed parasitizing the Japanese beetle. The question as to the origin of this parasite also is of interest. Is it a native of Japan? Was it brought to this coun-

[1] Received October 9, 1929.

[2] Kindly sent by Dr. HENRY FOX, of the U. S. Japanese Beetle Laboratory at Moorestown, N. J.